

SPECIFICATION AMENDMENTS

On page 1, insert above line 1, insert--Priority Claim

The present application claims priority on European Patent Application 03076532.5 filed May 21, 2003.--

On page 1, above line 1, insert--Field of the Invention--

On page 1, above line 6, insert--Background of the Invention--

On page 1, delete line 13-16.

On page 1, above line 17, insert--Summary of the Invention--

Paragraph starting on line 17 of page 1, and ending on line 4 of page 2, has been amended as follows:

~~--The present inventions include~~ According to the invention, there is provided a drill bit for drilling a borehole in an object, the drill bit having a central longitudinal axis and comprising a bit body provided with a central shank for connecting the drill bit to a drilling system, the drill bit further comprising at least one cutting arm, each cutting arm being provided with a set of cutters for cutting the object and being coupled to the bit body via pivot means allowing the cutting arm to pivot between a radially retracted position and a radially expanded position, the drill bit being provided with support means for supporting the cutting arm in the radially expanded position thereof, wherein the support means is arranged to transmit at least a portion of the rotational torque generated during drilling, from the cutting arm to the bit body so as to reduce or prevent transmission of said rotational torque via the pivot means.--

On page 2, delete line 5-33.

On page 3, delete line 1-21.

On page 3, above line 22, insert--Brief Description of the Drawings--

Paragraph starting on line 22 of page 3 has been amended as follows:

The embodiments of invention will be described hereinafter in more detail and by way of example with reference to the accompanying drawings in which:

Fig. 1 schematically shows a longitudinal view, partly in section, of an embodiment of the drill bit of the invention when in radially retracted position;

Fig. 2 schematically shows a longitudinal view, partly in section, of the drill bit of Fig. 1 when in radially expanded position; and

Fig. 3 schematically shows cross section 3-3 of Fig. 2.--

On page 4, above line 1 insert--Detailed Description of the Invention--

On page 9, above line 9 insert the following paragraphs:

--By virtue of the provision of the support means, the pivot means is relieved from taking the full torque load. It is thereby achieved that the pivot means is less vulnerable to damage due to transmission of high loads, without losing reliability of switching the drill bit from the retracted to the expanded position and vice versa.

In another aspect, the invention provides a hydraulic system for driving a pivoting movement of a pivotable tool arm between a radially retracted position and a radially expanded position, the hydraulic system comprising a cylinder and piston means slidably arranged in the cylinder forming a drive chamber on one side of the piston means and a return chamber on the other side of the piston means, the piston means having a forward and a rearward position in the cylinder whereby the piston means is activatable to its rearward position by causing the drive force acting on the piston as a result of pressure in the drive chamber to exceed the return force acting on the piston as a result of pressure in the return chamber, which piston means is coupled to the pivotable tool arm for driving the tool arm from the retracted position to the expanded position when the piston is driven into its rearward position, whereby the piston means is coupled to gate means with is arranged such that the return force acting on the piston as a result of pressure in the return chamber exceeds the drive force acting on the piston as a result of pressure in the drive chamber when the piston means is in or near its forward position whereas the opposite is the case when the piston means is in a position other than in or near its forward position.

When the tool arm is in its retracted position, the piston means can be positioned in or near its forward position where the gate means is switched such as to bias the piston means to its forward position. When the piston means is mechanically moved out of its forward position, the gate means is switched because it is coupled to the piston means, which results in the drive force acting on the piston as a result of pressure in the drive chamber exceeding the return force acting on the piston as a result of pressure in the return chamber. Consequently, the tool arm is pivoted to its expanded position and held in that position by the piston means. The starting situation, whereby the piston means is again biased in its forward position can be restored by mechanically forcing the piston means to its forward position, or by provision of additional gate means for regulating the pressures inside the drive chamber and return chamber such as to move the piston means forward on command.—

Paragraph starting on line 9 of page 9 has been amended as follows:

--Among other features that may ~~can~~ be included in the drill bit are:

- A gripping device for locking the tube once the arms have reached the fully expanded position by hydraulic actuation via the piston and tube. This way the bit is locked in expanded position. At the end of a bit run the bit can be collapsed by pulling the drilling assembly into the casing again. This pulling force should enable shear pins that hold the gripping device to fail so that the tube is released again and the bit opens and the under-reaming arms can move to the retracted position.—

On page 11, above line 1, insert --We claim:--